

PRESS RELEASE

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**Animal disease research misses the human perspective say researchers**

Animal disease research concentrates too much on the behaviour of micro organisms while ignoring the role played by human beings; we need to take more account of the human dimension if the work of scientists is to be translated effectively into policy, according to scientists at Lancaster and Liverpool universities.

The interdisciplinary project, which was carried out as part of the UK Research Councils’ Rural Economy and Land Use Programme, examined three animal diseases: Foot and Mouth Disease, Avian Influenza and Cryptosporidiosis. The team found that although policy makers need up to date information in order to take timely decisions, putting the research into practice may falter because the diverse perspectives of the people and organisations involved have not been taken into account.

Modelling of disease transmission and impacts tends to be built on the behaviour of disease organisms and animal vectors, but often disregards information about the behaviour of the people and organisations who manage the animals or who are affected by the disease, whether commercially, emotionally, or through risks to human health.

Such a partial outlook actually generates uncertainty in the management of disease, say the scientists. They also found a lack of transparency among the organisations involved about how they prioritise diseases. When management strategies are put into practice, their priorities often seem to clash. Where, as is common, diseases cross national boundaries these problems are often amplified because of international differences in regulation.

An interdisciplinary approach, combining natural and social sciences, can help to overcome this blinkered perspective and make research more effective.

Professor Louise Heathwaite from Lancaster University who co-led the project explained: “There is a concentration on technical dimensions and a neglect of human factors with the result that the research can be lost in translation and fail to inform policy. Sometimes it can even increase uncertainty.

“What is needed is a consistently interdisciplinary approach to animal disease, combining economic, social and technical perspectives at every level: strategic, tactical and operational.”

“In the past 25 years the UK has learned some very hard lessons indeed about how animal disease can affect human society in unpredictable and devastating ways” added Professor Jonathan Wastling, who led the team at Liverpool’s School of Veterinary Science.

“By adopting a common framework for decision-making focussed on better communication between sectors and more open sharing of information, particularly about areas of uncertainty, we will improve not only animal health and welfare, but help to protect our food security and human health.”

Notes for editors:

1 The research took a cross-disease approach using three contrasting diseases:

* **Foot and Mouth Disease:** A highly infectious disease mainly affecting farm livestock. Causes a fever, followed by blisters and ulceration around the mouth and feet. Severe economic and societal consequences of outbreaks.
* **Avian Influenza:** A viral disease of both wild and domestic birds. Can cause risks to human health and significant economic losses. Potential for transformation into a pandemic disease of humans is a great concern for world health policy.
* **Cryptosporidiosis:** Gastrointestinal disease in animals and humans caused by ingestion of the water-borne parasite *Cryptosporidium*. Responsible for between 3000-6000 human cases of illness per year in the UK.

1. A new [policy and practice note](http://www.relu.ac.uk/news/policy%20and%20practice%20notes/36%20Heathwaite/RELU%20PP36%20WEB.pdf) from the research may be found on the Relu website. [More information about the project](http://www.relu.ac.uk/research/projects/Third%20Call/Wynne.htm) is also available.
2. **The Rural Economy and Land Use Programme** is an interdisciplinary collaboration between the Economic and Social Research Council (ESRC), the Biotechnology and Biological Sciences Research Council (BBSRC) and the Natural Environment Research Council (NERC), with additional funding provided by the Scottish Government and Defra. See [www.relu.ac.uk](http://www.relu.ac.uk) for more information about the Relu programme.
3. The **University of Liverpool** is one of the UK’s leading research institutions with an annual turnover of £410 million, including £150 million for research. Liverpool is ranked in the top 1% of universities worldwide and is a member of the Russell Group. <http://www.liv.ac.uk/>
4. **Lancaster University** is a member of the 1994 Group of smaller research intensive universities and is ranked highly for quality in major UK and international league tables. In the 2008 Research Assessment Exercise Lancaster emerged in the top band of UK Universities with a high proportion of its research rated ‘world leading’. The latest league table, the Complete University Guide 2013, ranks Lancaster ninth in the country. The Lancaster Environment Centre brings together a community of university environmental researchers, government scientists and a growing number of commercial enterprises with the aim of addressing 21st century environmental challenges, especially those related to environmental change, sustainable resource and chemical management, biodiversity & ecosystem function and sustainable agriculture.
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